

REMARKS/ARGUMENTS

Applicants elect to prosecute the claims of Group 1 (claims 1, 6, 31 (in part), and 32 (in part) in the present application. Applicants further elect with traverse to prosecute claims directed to SEQ ID NO: 4. In the Office Action, the Examiner states that restriction between these sequences is proper because they lack the same or corresponding special technical features, as required by PCT Rule 13.2. In particular, the Examiner states that the sequences disclosed and claimed in the present application do not share a common structure or function that distinguished them from the prior art. In fact, as explained below, SEQ ID NOs: 4 and 6 do share such a common technical feature.

As shown in Figure 2(C) of the present application, SEQ ID NOs: 4 and 6 are splice variants of MICAL2-PV. SEQ ID NO: 4 is the “long form” and SEQ ID NO: 6 is the “short form.” These two proteins have unique C-terminal structures as compared with MICAL2 that can be seen in an alignment of the SEQ ID NOs: 4, 6, and MICAL2, shown in the attached appendix. As can be seen the N-terminal sequence from the 1st to the 739th residue is common to the three proteins. However, the same C-terminal sequence is present in SEQ ID NO: 4 (residues 889-976) and SEQ ID NO: 6 (residues 865-955), but is *not* present in MICAL2. Thus, SEQ ID NOs: 4 and 6 share a special technical feature that distinguishes them over the prior art.

Appl. No. 10/529,381
Amdt. dated January 14, 2008
Reply to Office Action of December 12, 2007

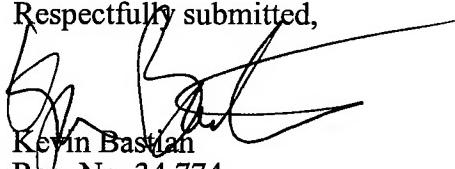
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CONCLUSION

In view of the foregoing, Applicants believe that unity between SEQ ID NOs: 4 and 6 should be acknowledged in the present application. Applicants respectfully request withdrawal of the restriction between these two sequences.

If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at 415-576-0200.

Respectfully submitted,



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Attachments
KLB:klb
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Appendix

Sequence 1: SEQ ID NO: 4 976 aa
 Sequence 2: SEQ ID NO: 6 955 aa
 Sequence 3: known MICAL2 1124 aa

SEQ ID NO: 4	MGENEDEKQAAQAGQVFENFVQASTCKGTLQAFN LTRHLDLDPLDHRNFYSKLKSKVTTW	60
SEQ ID NO: 6	MGENEDEKQAAQAGQVFENFVQASTCKGTLQAFN LTRHLDLDPLDHRNFYSKLKSKVTTW	60
known MICAL2	MGENEDEKQAAQAGQVFENFVQASTCKGTLQAFN LTRHLDLDPLDHRNFYSKLKSKVTTW	60
	*****	*****
SEQ ID NO: 4	KAKALWYKLDKRGSHKEYKRGKSCTNTKCL VGGGPGCGLRTA ELAYLGAKVVVVEKRDS	120
SEQ ID NO: 6	KAKALWYKLDKRGSHKEYKRGKSCTNTKCL VGGGPGCGLRTA ELAYLGAKVVVVEKRDS	120
known MICAL2	KAKALWYKLDKRGSHKEYKRGKSCTNTKCL VGGGPGCGLRTA ELAYLGAKVVVVEKRDS	120
	*****	*****
SEQ ID NO: 4	FSRNNVLHLWPFT HDLRGLGAKKFYGKFCAGS DH1 SQLQL LFKVALMLGVE HVN	180
SEQ ID NO: 6	FSRNNVLHLWPFT HDLRGLGAKKFYGKFCAGS DH1 SQLQL LFKVALMLGVE HVN	180
known MICAL2	FSRNNVLHLWPFT HDLRGLGAKKFYGKFCAGS DH1 SQLQL LFKVALMLGVE HVN	180
	*****	*****
SEQ ID NO: 4	VEFKVLEPPEDQENQK GWRAEFLPTDHSLSSEFEFDV I GADGRRNTLEGFRRKEFRGK	240
SEQ ID NO: 6	VEFKVLEPPEDQENQK GWRAEFLPTDHSLSSEFEFDV I GADGRRNTLEGFRRKEFRGK	240
known MICAL2	VEFKVLEPPEDQENQK GWRAEFLPTDHSLSSEFEFDV I GADGRRNTLEGFRRKEFRGK	240
	*****	*****
SEQ ID NO: 4	LAIAITANF INRNSTAEEKVEEISGVAF FNQKFFQDLKEETG DLEN VYYKDCTHYFV	300
SEQ ID NO: 6	LAIAITANF INRNSTAEEKVEEISGVAF FNQKFFQDLKEETG DLEN VYYKDCTHYFV	300
known MICAL2	LAIAITANF INRNSTAEEKVEEISGVAF FNQKFFQDLKEETG DLEN VYYKDCTHYFV	300
	*****	*****
SEQ ID NO: 4	MTAKKQSLLDKGV INDY DTMELLCAENVNQDNLLSYAREAADFATNYQLPSLDFAMNH	360
SEQ ID NO: 6	MTAKKQSLLDKGV INDY DTMELLCAENVNQDNLLSYAREAADFATNYQLPSLDFAMNH	360
known MICAL2	MTAKKQSLLDKGV INDY DTMELLCAENVNQDNLLSYAREAADFATNYQLPSLDFAMNH	360
	*****	*****
SEQ ID NO: 4	YGQPDVAMFDFTCMYASENAALVRERQAHQLLVALVGDSLLEPFWPMGTGCARGFLA邢D	420
SEQ ID NO: 6	YGQPDVAMFDFTCMYASENAALVRERQAHQLLVALVGDSLLEPFWPMGTGCARGFLA邢D	420
known MICAL2	YGQPDVAMFDFTCMYASENAALVRERQAHQLLVALVGDSLLEPFWPMGTGCARGFLA邢D	420
	*****	*****
SEQ ID NO: 4	TAWMVKSWNQGTTPPLELLAERESLYRLLPQTTPEN NKNFEQYTLDPGTRYPNLNSHCVR	480
SEQ ID NO: 6	TAWMVKSWNQGTTPPLELLAERESLYRLLPQTTPEN NKNFEQYTLDPGTRYPNLNSHCVR	480
known MICAL2	TAWMVKSWNQGTTPPLELLAERESLYRLLPQTTPEN NKNFEQYTLDPGTRYPNLNSHCVR	480
	*****	*****
SEQ ID NO: 4	PHQVKHLY TKELEHYPLERLGSVRRSVNLSRKESD RPSKLLTWCCQQQTEGYQHVNVTD	540
SEQ ID NO: 6	PHQVKHLY TKELEHYPLERLGSVRRSVNLSRKESD RPSKLLTWCCQQQTEGYQHVNVTD	540
known MICAL2	PHQVKHLY TKELEHYPLERLGSVRRSVNLSRKESD RPSKLLTWCCQQQTEGYQHVNVTD	540
	*****	*****

SEQ ID NO: 4	LTTSWRSGLALCAI IHRFRPEL INFDSLNEDDAVENNQLAFDVAEREF GIPPVTTGKEMA	600
SEQ ID NO: 6	LTTSWRSGLALCAI IHRFRPEL INFDSLNEDDAVENNQLAFDVAEREF GIPPVTTGKEMA	600
known MICAL2	LTTSWRSGLALCAI IHRFRPEL INFDSLNEDDAVENNQLAFDVAEREF GIPPVTTGKEMA	600

SEQ ID NO: 4	SAQEPDKLSMVMYLSKFYELFRGTPLRPVDSWRKNYGENADLSLAKSS ISNNYLNLT FPR	660
SEQ ID NO: 6	SAQEPDKLSMVMYLSKFYELFRGTPLRPVDSWRKNYGENADLSLAKSS ISNNYLNLT FPR	660
known MICAL2	SAQEPDKLSMVMYLSKFYELFRGTPLRPVDSWRKNYGENADLSLAKSS ISNNYLNLT FPR	660

SEQ ID NO: 4	KRTPRVDGGQTGENDMKRRRKGFTNLDEPSNFSSRSLGSNQE CGSSKEGGNQNKV KSMAN	720
SEQ ID NO: 6	KRTPRVDGGQTGENDMKRRRKGFTNLDEPSNFSSRSLGSNQE CGSSKEGGNQNKV KSMAN	720
known MICAL2	KRTPRVDGGQTGENDMKRRRKGFTNLDEPSNFSSRSLGSNQE CGSSKEGGNQNKV KSMAN	720

SEQ ID NO: 4	QLLAKEESTRNPSLMKQE	739
SEQ ID NO: 6	QLLAKEESTRNPSLMKQE	739
known MICAL2	QLLAKEESTRNPSLMKQERRVSGIGKPVLCSSSGPPVHSCCPKPEEATPSPSPLKRQF	780

SEQ ID NO: 4		739
SEQ ID NO: 6		739
known MICAL2	PSVVVTGHVLRELKQVSAGSECLSRPWRARAKSDLQLGGTENATLPSTRPRAQALSGVL	840

SEQ ID NO: 4		739
SEQ ID NO: 6		739
known MICAL2	WRLQQVEEKILQKRAQNLANREFHTKNIKEKA AHLASMFHGDFPQNKL SKGLSHTHP	900

SEQ ID NO: 4	KKSPSGFHFP SHLRTVHPQE	760
SEQ ID NO: 6		739
known MICAL2	SPPSRLPSPDPAASSSPSTVDSASPARKEKKSPSGFHFP SHLRTVHPQLTVGVSSGIG	960

SEQ ID NO: 4	SMRKSFPLNLGGSDTCYFCKKR VYV MERLSAEGH	794
SEQ ID NO: 6	SMRKSFPLNLGGSDTCYFCKKR VYV MERLSAEGH	773
known MICAL2	AAAEVLVNLYMNDHRPKAQATSPDLES MRKS FPLNLGGSDTCYFCKKR VYV MERLSAEGH	1020

SEQ ID NO: 4	FFHRECFRC SICATT LRLAAYTFDCDEGKF YCKPHF IHCKTN SKQRK RRAELKQQRE EEA	854
SEQ ID NO: 6	FFHRECFRC SICATT LRLAAYTFDCDEGKF YCKPHF IHCKTN SKQRK RRAELKQQRE EEA	833
known MICAL2	FFHRECFRC SICATT LRLAAYTFDCDEGKF YCKPHF IHCKTN SKQRK RRAELKQQRE EEA	1080

886 (NO:4) / 865 (NO:6)

↓

SEQ ID NO: 4	TWQEQEAPRRTPTESSCAVAAIGTLEGSPPGISTSFFRKVLGWPLRLPRDLCNWMQGLL	914
SEQ ID NO: 6	TWQEQEAPRRTPTESSCAVAAIGTLEGSPPGISTSFFRKVLGWPLRLPRDLCNWMQGLL	893
known MICAL2	TWQEQEAPRRTPTESSCAVAAIGTLEGSPP	1111

SEQ ID NO: 4	QAAGLHIRDNAYNYCYMYELLSLGPLLWAFSEVLAAMYRESEGSLESICNWVLRCFPVK	974
SEQ ID NO: 6	QAAGLHIRDNAYNYCYMYELLSLGPLLWAFSEVLAAMYRESEGSLESICNWVLRCFPVK	953
known MICAL2	VHFSLPVVLHPLLG	1124
	: : .**;* . :	
SEQ ID NO: 4	LR	976
SEQ ID NO: 6	LR	955